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(54) ZINC-ALKALINE BATTERY

(57) Abstract:

PURPOSE: To aim at improvement in battery performance as checking a generation rate of hydrogen gas especially in high temperature storage for a long time, by using a specific zinc alloy as a negative electrode active material.

CONSTITUTION: In this battery, as a negative electrode active material, it uses such a zinc alloy that contains a total amount of 0.005@0.5wt% of more than one kind to be selected from lead, indium, thallium, cadmium, tin, bismuth, gallium and silver, and aluminum of 0.005@0.5wt% and copper of 0.001@0.3wt%. And, this zinc alloy is used as it is or after being gelatinized. When a rate of aluminum content is less than 0.005wt%, an improved effect for discharge capacity is little, and when it exceeds the range of 0.5wt%, a generating quantity of hydrogen gas grows larger, thus it is undesirable. When the rate of copper content is less than 0.001wt%, a preventive effect for intercrystalline corrosion is little, but when exceeding

the range of 0.3wt%, it exerts an adverse effect on the discharge capacity. Likewise, it is desirable that the rate of aluminum content is in the range of 0.005@0.2wt%, and when it exceeds the range of 0.2wt%, the content effect is not seen so much.

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